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## FOOD INFORMATION

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## UNITED STATES DEPARTMENT OF AGRICULTURE

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Subject: Farm Safety Rules for Using Insecticides

Field Distribution: War Board Members, AAA Committeemen, Extension Editors,  
RAE Analysts, OD Marketing Reports Chiefs, SCS, FSA,  
FCA Regional Information ChiefsSuggested Use: Background information; local radio, press, and publica-  
tions, during National Farm Safety Week.Farm Safety Rule: Be Careful When You Use Insecticides

To many farmers and old-time gardeners, care in handling poisonous insecticides is second nature. They seldom have had trouble with them because they know how to avoid accidents. Many others, less experienced, have had little trouble as long as they were using the kind of insecticide which requires no special precautions, such as rotenone and pyrethrum, now in short supply. Some may not need the following suggestions for handling more poisonous compounds, but even experienced farmers can review with profit the Bureau of Entomology and Plant Quarantine recommendations which practical farm experience and field tests have proved to be necessary to assure farm safety in the long run.

Many others are using poisons in farm practice for the first time. This includes those who are new to farming and Victory gardening, or who are using arsenicals, nicotine, and fluorine compounds, as wartime substitutes for other compounds to which they are more accustomed. Also included are young war veterans returning to the land, volunteer city labor helping farmers meet production goals, Victory Corps youth, and those farmers who find that use of poisonous insecticides has caused accidental injury to farm workers, or loss of livestock, or other harm to farm animals and crops.

While certain insecticides, require extra precautions particularly the arsenicals, such as calcium arsenate, lead arsenate, and paris green, fluorine compounds such as sodium fluoride, sodium fluosilicate, and cryolite, and nicotine compounds, the use of these poisons need not be avoided by those who are unaccustomed to handling them. They can be and are used with complete safety by millions of farmers and Victory gardeners who observe certain simple precautions.

All that is needed by anyone is to learn what safe practice requires and to use normal care in following it. This applies to many experienced farmers who never had a complete explanation of how to handle poisons, and who had to learn what they know through more or less costly mistakes.



## Farm Safety Rules for Using Insecticides

When these precautions are disregarded on the farm, and in the home, it is done at considerable risk to man, livestock or consumers, sooner or later resulting in unnecessary livestock and crop losses, injury to man and animals, and accidental deaths.

The following precautions, to avoid these hazards, are recommended by the Bureau of Entomology and Plant Quarantine.

1. When mixing or applying poisonous insecticides take extreme care to keep materials out of the mouth and eyes, and away from tender parts of the body.
2. When spraying or dusting operations are long and continuous:
  - (a) Keep the body well covered, even in the warmest weather.
  - (b) Wear goggles to protect the eyes.
  - (c) Wear a standard full face respirator. Wearing a handkerchief or cloth over the nose and mouth is not sufficient protection.
3. Wash your face and hands thoroughly, after using any insecticide. Long exposure of hands and body to accumulation of small quantities of spraying or dusting materials may be harmful.
4. After long exposure, take a bath, and change clothes, both at noon and after the day's work if using insecticides all day.
5. To avoid accumulation of residues, frequently wash clothing used in spraying operations.
6. Plainly mark all containers in which insecticides are stored as "poison" with date of purchase. Keep these tightly closed and in a specially selected place, preferably under lock and well out of reach of children, as well as others who may be unfamiliar with their poisonous nature.
7. For avoiding accidental poisoning, artificially colored lead arsenate, calcium arsenate, and sodium fluoride are preferable to the white powder.
8. Do not leave open containers in which materials are being mixed, nor set aside batches of prepared insecticides for a moment, so exposed that domestic farm animals can lick them in passing.
9. Take special care to prevent domestic animals and livestock from being poisoned through feeding on crop remnants that have been sprayed, licking containers or drinking water which may have been contaminated.
10. Bury or burn empty packages and bags which contained insecticide materials. Do not burn empty arsenical containers, unless in open air with care to avoid exposure of persons or animals to fumes.

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11. Bury unused portions or discarded material at least a foot below the surface, and away from water supply or drainage.
12. Horses, cows, sheep and poultry should be prevented from feeding or grazing under trees that have been sprayed, or under accidentally sprayed roofs shedding water.
13. To protect the consumer, guard against leaving residues of insecticides on the harvested products. Do not spray or dust arsenicals and fluorine compounds on edible foliage or fruit when residues on the part used for food cannot be removed either by washing, or wiping or by stripping outside leaves.
14. Do not apply arsenicals and fluorine compounds to strawberries within three weeks of harvest, or to bramble (blackberries, raspberries, etc.) fruits after blossoms have opened and berries have begun to form. Treatment after such time may leave dangerous quantities of residues on harvested berries. For grapes, the last applications of arsenicals should be made just after the blossoms fall.
15. All fruits treated with arsenicals or with fluorine compounds should be thoroughly washed to remove excess deposits, before being eaten or offered for sale. On a commercial basis for certain fruits, weak acid or alkaline solutions are used to remove excess poisonous residues.
16. Insecticidal residues cannot be removed satisfactorily from cabbage, lettuce, celery, spinach, cauliflower, turnip green, kale, broccoli, or other greens by superficial washing of head or leaves.
17. Following are examples of consumer safety rules for specific vegetables when using arsenical or fluorine compounds likely to leave spray residues:

Cabbage      Do not apply paris green, cryolite, or calcium arsenate to any portion of the cabbage plant to be eaten, or after the head has begun to form. If you use at other times, remove all the outer leaves of the headed cabbage, before sale or eating.

Celery        Do not use arsenicals and fluorine compounds.

Tomatoes     The washing process in canneries and wiping of fruit for market with a cloth will eliminate appreciable residues.

Beans        For green and snap beans, do not apply sprays or dusts containing cryolite or arsenicals after



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the pods have begun to form. If treatment is made at other times, wash two or three times in water to remove harmful residues before sale.

Peppers Wash before marketing or processing.

18. In rooms or in barns that have been sprayed with ordinary fly sprays, one should avoid breathing the fumes repeatedly, or for long periods of time.
19. As a summary, the most important rule is: especially for all arsenical, nicotine or fluorine compounds which are poisonous to man and animals, clearly label the insecticide and store away from food products; do not apply to edible parts of fruits or vegetables unless a long period intervenes between time of application and harvest or unless acid or alkaline washes are used to remove the arsenical or fluorine compound. For further precautions in the use of specific insecticides and equipment in garden and farm use for controlling insects on fruits and vegetables, see U. S. Department of Agriculture Miscellaneous Publication, No. 526.
20. In the use of fumigants, such as calcium or sodium cyanide, keep the fumigants in tight containers, labeled plainly, and stored in a dry, safe place. Use only if familiar with their poisonous nature and with methods of application. Carbon disulfide, the common grain fumigant, is highly inflammable; great care must be used in storing and using it. For applying fumigants to buildings, the No. 1 rule is to employ only experienced operators and supply the labor with approved gas masks, and with special clothes to protect the skin at all times, during work. For further details about fumigating large buildings against insects, see U. S. Department of Agriculture Circular No. 369, "Industrial Fumigation Against Insects".

